CHAPTER 7

ENGINEERS IN CLOSE COMBAT

Combat engineers are combat-arms soldiers. When employed in the forward TF area, the engineer company often employs close-combat skills, using fire and movement to accomplish its engineer mission.

On the modern battlefield, the enemy has the capability to detect, move toward, and engage engineer forces quickly without regard to their location. Consequently, all engineers are organized, trained, and equipped to fight and destroy the enemy. Combat engineers also have the secondary mission of reorganizing into infantry units and fighting as infantry. This chapter addresses aspects of engineers in close combat, whether organized to fight as engineers or infantry.

FIGHTING AS ENGINEERS

Combat engineers are organized, trained, and equipped to engage in close combat to accomplish their engineer mission. They may have to fight—

- As part of a maneuver formation to accomplish the TF's mission.
- To assist the TF in defeating an unexpected attack.
- To protect a critical demolition target that must be kept passable until friendly forces are able to withdraw.
- To maintain security at a work site.
- For self-protection in bivouac or on the march.

The enemy will attempt to kill combat engineers as well as infantry or armor. It is imperative that engineer forces are trained to be physically aggressive and tactically competent.

ENGINEER ORGANIZATION FOR COMBAT

The combat-engineer soldier is trained to accomplish the same basic tasks as the infantryman. He specializes in the engineer-unique tasks, as the infantryman specializes in the infantry-unique tasks; however, the difference is simply a matter of emphasis. Engineer squads and platoons are trained to move rapidly and fight violently-either by themselves, or as a part of a combined-arms formation.

Mechanized combat-engineer squads are organized around the armored personnel carrier (APC) and are armed with small arms, grenade launchers, light AT weapons, and explosives. Within the platoon, they carry a basic load of conventional mines sufficient to emplace a minefield to support a platoon defense.

All engineer squad carriers are usually encumbered by trailers *except* when moving as part of a combined-arms formation. The squad must cache its trailer before it can effectively maneuver or employ mounted fire and movement. Typically, the A&O platoon will be responsible for the six squad trailers until they are needed. During defensive operations, the trailers allow the squads to carry mines, extra explosives, and equipment required for defensive preparation.

ENGINEER COMBAT CAPABILITIES

During offensive operations, combat-engineer companies are normally task-organized with and are integrated into a battalion/TF. The engineer company is designed to provide mobility, survivability, and countermobility to the TF. The engineer company

fights with explosives and mines as well as with organic weapons. Regardless of the mission, engineer APCs are combat vehicles that provide a significant contribution to the TF's combat power. The engineers fire and maneuver as necessary to accomplish the mission under the formation commander's direction.

When involved in an assault, engineers fight dismounted on the objective and focus on breaching the protective obstacles, including demolition tasks against positions and dug-in vehicles. Demolition charges produce significant shock and concussion effects on defenders as well as destroy critical positions and combat vehicles. The engineers use fire and movement against defenders as necessary to accomplish their engineer mission.

The CEV also fights in the assault. With its demolition gun, machine guns, and dozer blade, it can be very effective in close combat during the final stages of overrunning an objective.

Combat engineers employed on reserve demolition targets are primarily responsible for executing the technical procedures necessary to ensure target destruction. However, the engineer demolition party responds to enemy contact, assisting the demolition guard in the target's defense to hold it open or to gain the necessary time to ensure its destruction. The engineer force may also assist in target defense by installing antipersonnel (AP)/AT mines to support the defensive scheme.

Engineer units engaged in emplacing obstacle systems provide their own local security. They employ close-combat techniques against attackers to the limit of their capability to ensure that the obstacle system is completed.

The following is an example of fighting as combat engineers:

A *combat-engineer platoon is constructing a series of minefield as part of a turning obstacle group (see Figure 7-1). Group AIB is*

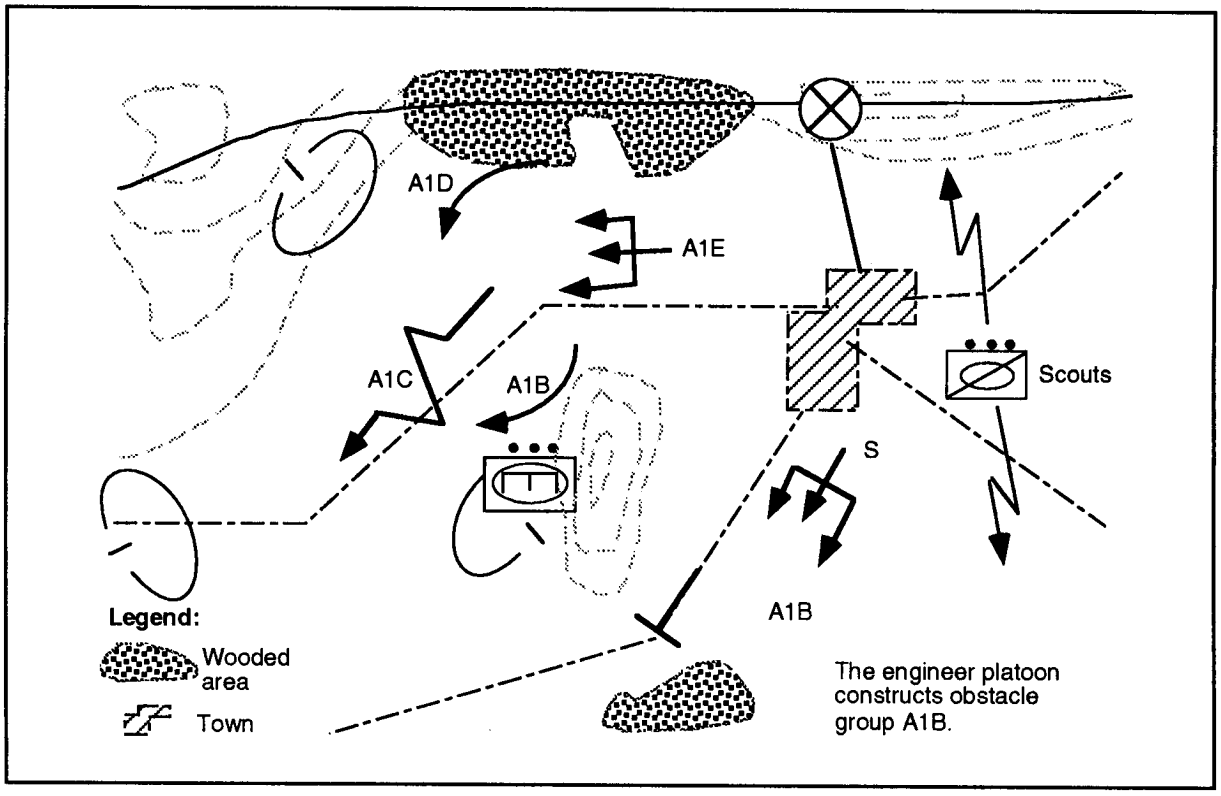

Figure 7-1. General situation

located on the southern side of the TF's EA. The engineer platoon leader was warned (during the OPORD) that enemy reconnaissance would try to transit the TF's sector near his platoon work site.

At 0010 hours, the platoon leader receives a radio message from the engineer company commander warning him of possible enemy contact. An enemy reconnaissance element has slipped by the TF's security screen. The company commander advises the platoon leader to increase the platoon's vigilance (see Figure 7-2).

The platoon leader places a combat-engineer vehicle (CEV) (which was attached to assist the platoon) to cover the most likely enemy AA. He coordinates his platoon's exact location with the maneuver team that he is supporting (he must ensure that the maneuver team does not mistake the engineers for the enemy reconnaissance element). He informs his squad leaders of his actions and the platoon continues to work.

At 0130 hours, the CEV operator reports that he has an unidentified vehicle forward of the platoon work site and requests permission to fire. The platoon leader orders the CEV operator to observe, but not fire until ordered. He quickly checks with the maneuver team to ensure that no friendly forces are in the area and to warn them of the approaching vehicle.

The maneuver team replies that there are no friendly forces forward of the engineer platoon. The CEV operator reports that the vehicle is a BMP (an amphibious infantry combat vehicle) and again requests permission to fire. The platoon leader orders the CEV operator to engage with the main gun and orders his

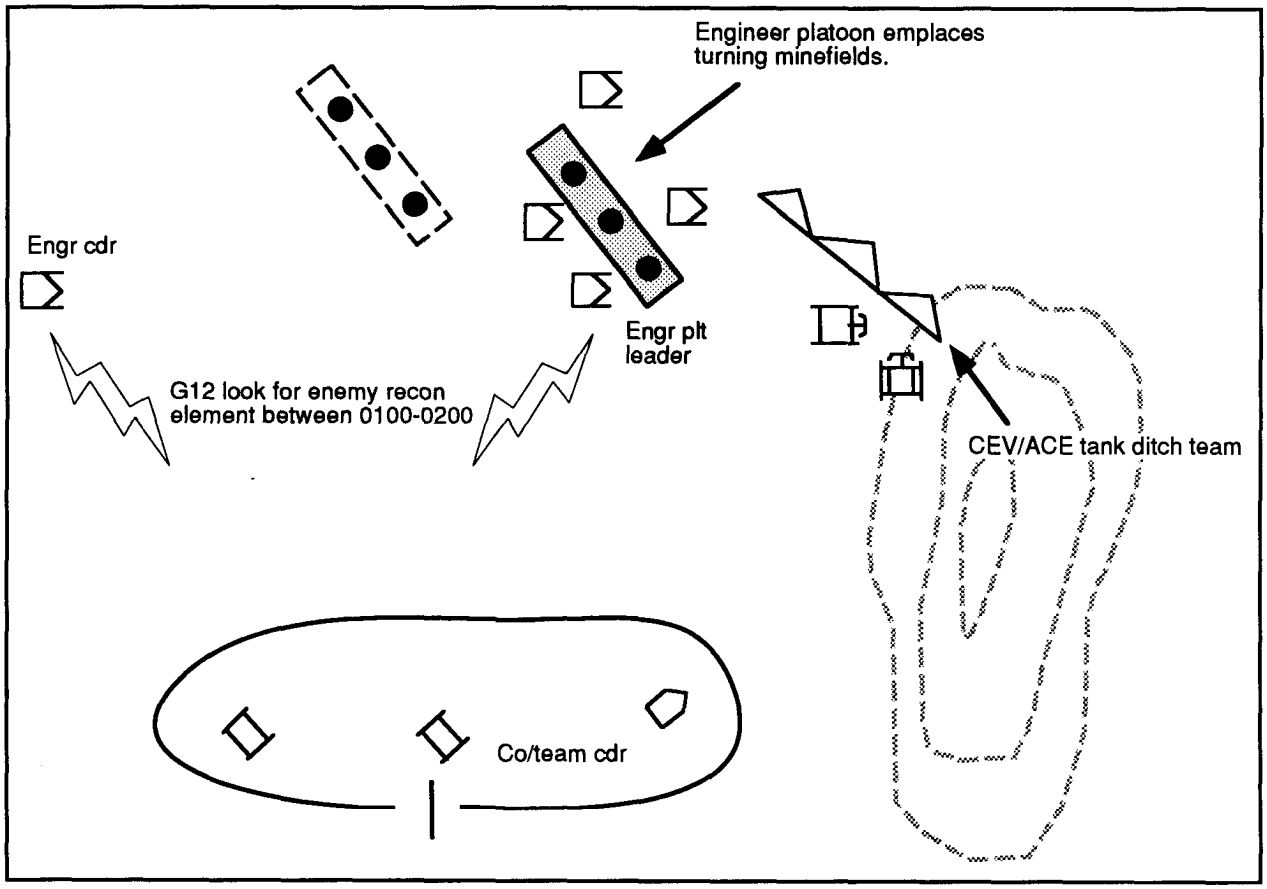

Figure 7-2. Engineer platoon receives threat warning

squad carriers to orient their weapons on the enemy BMP. He gives a platoon-directed fire order (see Figure 7-3). The platoon destroys the enemy reconnaissance BMP. After the platoon secures the area and reports, it reor - ganizes and continues work on the obstacle system.

In this case, the engineer platoon fought as engineers. All of the skills demonstrated by the platoon (such as directed fires, establishing local security, and engaging in close combat) are engineer skills. The engineer platoon must master these skills to work effectively and to survive in the forward MBA. The engineer platoon effectively achieved two things during this engagement—they killed an enemy reconnaissance asset, preserving the TF's security, and they stayed alive to finish a key obstacle group for the TF's defense.

FIGHTING AS INFANTRY

Engineer units have historically performed their secondary mission well—to organize and fight as infantry. This mission still exists for today's combat-engineer company. While engineers fight continually as engineers, their employment as infantry requires serious consideration. The following paragraphs address the employment of combat engineers as an infantry unit. It is important to remember that the engineer unit will

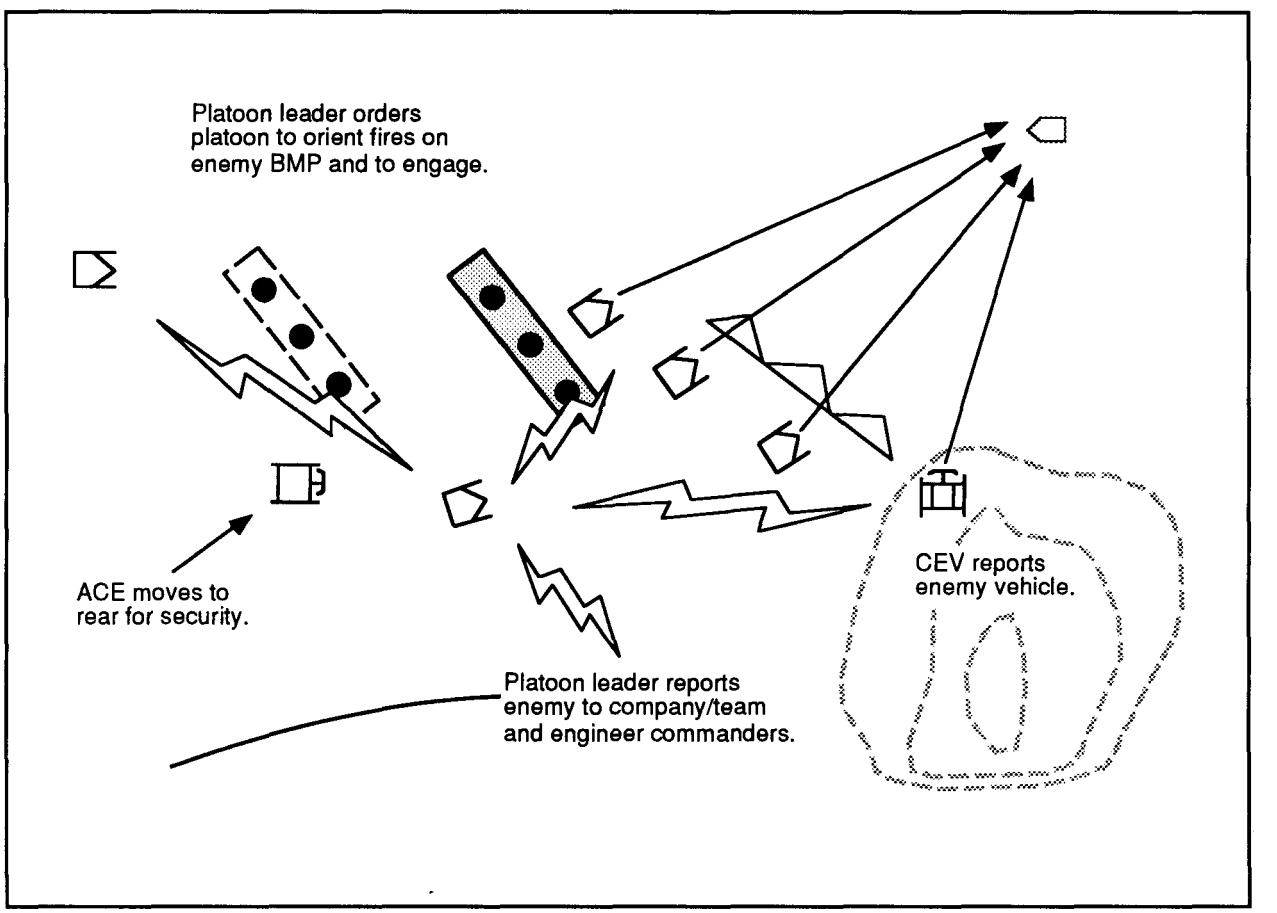

Figure 7-3. Engineer platoon destroys enemy BMP

physically cease to exist as an engineer organization and will become infantry.

EMPLOYMENT CONSIDERATIONS

According to FM 5-100, the TF commander, unless otherwise prohibited, has the authority to reorganize the engineer company as infantry if engineers are in a command relationship with the TF. Normally, this authority is retained by division and corps commanders. In his decision, he must carefully weigh the gain in infantry strength against the loss of engineer support. The engineer company provides him far more combat power in its primary configuration than as infantry. Stopping the engineer work may reduce the combat power of his entire force. Because of the long-term impact, the commander employing an engineer unit as infantry has the responsibility to notify the next higher headquarters of his action.

The decision to employ an engineer unit as infantry is made by the commander after careful analysis considering both demands for infantry and for engineers. An immediate requirement for infantry does not require reorganization—the engineers are simply committed to the fight. Maintaining unit integrity is an important consideration. Engineer soldiers should never be used as individual infantry replacements but committed as reorganized infantry units (such as platoons or companies). Reorganization takes place when there is adequate time to move unnecessary engineer elements and equipment from the battle area and to augment the engineer structure with additional capabilities. The commander normally considers reorganizing when he forecasts a shortage of infantry before a future operation or phase of an operation. The decision is taken after weighing METT-T factors and determining an acceptable level of risk. Available time to prepare is critical. Normally, the situation is extremely urgent when engineers must be converted to infantry; consequently, time to reorganized completely is rarely available.

REORGANIZATION CONSIDERATIONS

The commander must consider several important factors before he converts the engineer company to infantry. These include the—

- Situation's urgency.
- Result of losing engineer support.
- Reaction time required.
- Engineer combat capability or potential to fight as infantry.
- Engineer training level.
- Engineer mission, if committed as infantry.
- Engineer support requirements of the force after the commitment of the engineers as infantry.
- C^2 of engineer assets not committed as infantry.
- CS assets the engineer company will need for their infantry mission (such as FIST-V, ambulances, air defense, and so forth).

Engineer companies are generally task-organized throughout the division area and are normally integrated with battalions/TFs. Engineers in combat vehicles or dismounted formations fight as required under the formation commander's command. Engineers preparing defenses fight from those positions with the defenders, if attacked. The engineers retain the ability to use their close-combat skills as infantry in unforeseen emergencies.

The commander directing this employment should provide early warning to allow the unit time to assemble, reorganize, and prepare before commitment. The engineer company must provide immediate liaison to the gaining maneuver command to facilitate planning and integration. This generally requires about 24 hours to accomplish, unless the unit has previously prepared for a similar mission.

When the engineer company is employed as infantry, one major consideration for the commander is the disposition of major items of engineer equipment such as ACEs, AVLBs, and SEEs. Equipment not used in the infantry role may be attached to other units for C^2 purposes or to accomplish other engineer tasks. This is METT-T driven and is generally based on the overall concept of the operation.

The commander directing the employment should augment the engineer company unit with air-defense and fire-support teams. The unit should also be augmented with heavy AT weapons and additional medical personnel, if available.

ORGANIC COMBAT POWER

Commanders with the authority to direct the employment of engineers as infantry must be aware of differences in combat power between engineer and infantry units. Engineer units provide the following:

- Combat-engineer platoon (mechanized). Organized as mechanized infantry, the platoon consists of four APCs, carrying a headquarters and three rifle squads. Each squad has a squad leader, a carrier team, and a dismount team.

- Combat-engineer company (mechanized). The forward elements of a reorganized engineer company consist of the company headquarters, two rifle platoons, and the A&O platoon. Engineer equipment not needed for the infantry mission will be further task-organized to support the maneuver mission or reorganized with the engineer battalion. The A&O platoon is not equipped to be mechanized infantry, but can be used to augment the other two platoons or as dismounted infantry. The CEVs should remain forward with the company; they provide a significant fire-power advantage to the company.

UNIT CAPABILITIES

Engineer units employed as infantry do not have the same capabilities as conventional infantry units. At the squad and platoon levels, engineers normally operate in organizations similar to infantry and have the same basic small-arms weapons. However, the mechanized-infantry platoon is equipped with the M2 Bradley fighting vehicle and has a marked advantage over the APC-equipped engineer platoon.

The engineer company can effectively control other arms as a company/team because it normally works closely with them. The company is best suited by training for defensive operations. To be fully effective, the engineer company needs heavy AT weapons augmentation and the normal CS provided to any infantry unit.

The most likely requirement for reorganizing engineers into infantry results when the force's reserve has been committed and it is necessary to reconstitute the reserve. As a reserve, the engineer company can be used to reinforce TF units in contact or as a blocking force to stop enemy penetration or counterattack. They can best accomplish this by building and occupying a strongpoint. Other uses include—

- Augmenting an armored battalion with infantry to build a TF.
- Augmenting an infantry battalion with an additional infantry company.
- Operating separately in an economy-of-force role or as a part of a brigade defense.
- Providing air-assault forces for seizing critical terrain.
- Replacing reconnaissance forces or scout platoons within the TF.

The above list can also be accomplished while fighting as engineers. Given today's unit organization, converting engineers to infantry is undesirable and formal reorganization is likely to be time-consuming.